

FLUID MECHANICS II

ENGINEERING 6961

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Important: Please do not use any electronic devices during lectures.

Student Conduct

“Like Professional Engineers, engineering students are expected to behave in a professional manner at all times. Students are encouraged to conduct themselves in a manner consistent with the PEG-NL code of ethics. MUN has two sets of rules which deal with inappropriate behaviour by students. The first set deals with academic offences such as cheating while the other set deals with non-academic offences such as disruptive behaviour in class. Both sets of rules can be found in the University Calendar under Regulations. It is strongly recommended that students read and follow these rules because the penalties for breaking them can be severe, the severest being expulsion from the University.”

Evaluation

Homework and labs are worth 10%. Quiz #1 (Monday 3 February) is worth 15%. Quiz #2 (Monday 17 March) is worth 15%. The final exam is worth 60%. A formula sheet will be provided at each quiz and the final exam. **Both quizzes will be held in the 9am to 10am Monday lab time slot.**

Approximate Due Dates for Labs

27 January; 10 February; 10 March; 17 March; 2 April

Approximate Due Dates for Homework

27 January; 10 February; 3 March; 17 March; 4 April

Content Summary

Fluid Mechanics II examines: compressible flows; differential analysis of fluid motion; conservation laws; boundary layer flows; turbulent flows; computational fluid dynamics; potential flows; low re flows; advanced topics.

Resources

Fluid Mechanics by Fox et al

Fluid Mechanics by Potter et al

Fluid Mechanics by Douglas et al

Texts by White; Munson; Cengel

EFLUIDS Videos: www.efluids.com

CFD Software: www.flow3d.com

Laboratory Facilities

Pelton Wheel Turbine Setup

Centrifugal Pump Setup

Shock Tube Setup

Waterhammer Setup

Subsonic Foil Setup

Lab Safety

Students must wear safety boots in the fluids lab.